Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A purified functional polynucleotide comprising ~~a tripartite construct having~~ three functional domains, said functional domains comprising an actuator domain, receptor domain, and a bridging domain comprising a communication module, wherein said communication module is a generic reporter of an occupation state of said receptor domain, and wherein interaction of the receptor domain with a signaling agent triggers a conformational change in the bridging domain which modulates the activity of the actuator domain.

2. (Previously Presented) A polynucleotide according to claim 1 wherein the signaling agent is a ligand that binds to the receptor domain.

3. (Original) A polynucleotide according to claim 1 wherein the activity of the actuator domain is catalytic.

4. (Currently Amended) A polynucleotide according to claim 1 wherein at least two of the domains ~~are~~ comprise non-overlapping polynucleotide sequences.

5. (Currently Amended) A polynucleotide according to claim 1 wherein at least two of the domains ~~are~~ comprise partially or completely overlapping polynucleotide sequences.

6. (Original) A polynucleotide according to claim 1 which is RNA.

7. (Original) A polynucleotide according to claim 6 which is a hammerhead ribozyme.

8. (Cancelled)

9. (Original) A polynucleotide according to claim 1 wherein the actuator domain exhibits catalytic activity that is triggered by binding of a chemical compound to the receptor domain.

10. (Cancelled)

11. (Currently Amended) A biosensor ~~according to claim 10~~ comprising a polynucleotide having three functional domains, said functional domains comprising an actuator domain, receptor domain, and a bridging domain comprising a communication module, wherein said communication module is a generic reporter of an occupation state of said receptor domain, and wherein interaction of the receptor domain with a signaling agent triggers a conformational change in the bridging domain which modulates the activity of the actuator domain, further wherein said ~~in which the~~ polynucleotide is attached to a solid support.

12. (Previously Presented) A method for detecting the presence or absence of a ligand or its concentration in a sample comprising contacting the sample with a polynucleotide according to claim 1.

13. (Original) A method according to claim 12 wherein the presence or absence of a ligand or its concentration is determined by observation of a chemical reaction.

14. (Original) A method according to claim 12 wherein the presence or absence of a ligand or its concentration is detected by observation of a change in polynucleotide configuration or function.

15. (Previously Presented) A process for preparing polynucleotides that are responsive to the presence or absence of a signaling agent, comprising linking together three functional domains comprising a polynucleotide actuator domain, a receptor domain, and a bridging domain comprising a communication module, wherein said communication module is a generic reporter of an occupation state of said receptor domain, such that interaction of the signaling agent with the receptor domain triggers a conformational change in the bridging domain which modulates the activity of the actuator domain.

16. (Original) A process according to claim 15 wherein the receptor domain has a ligand binding site and wherein ligand binding triggers a conformational change in the bridging domain that stimulates catalytic activity of the actuator domain.

17. – 18. (Cancelled)

19. (Currently Amended) ~~A~~ The process for preparing polynucleotides ~~RNA sensors~~ according to claim 15, wherein said polynucleotide is RNA.

20. – 22. (Cancelled)